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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/824,768	04/04/2001	Minoru Kuniyoshi	205446US0	1447

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EXAMINER

BOS, STEVEN J

ART UNIT	PAPER NUMBER
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1754

DATE MAILED: 09/16/2003

15

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/824,768

Applicant(s)
Kuniyoshi et al

Examiner
Steven Bos

Art Unit
1754



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Aug 5, 2003
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 3-12, 16-30, and 32-38 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3-12, 16-23, 25-30, and 32-38 is/are rejected.
- 7) ☒ Claim(s) 24 is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other: _____

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In claim 25, "then." at the end of the claim is misplaced and should be deleted.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1,9 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In claim 1, "and having a degree of manganese dissolution of 70% by weight or higher based on the iron contained in the treated manganese dioxide ore when dissolved in sulfuric acid" is new matter. Original claim 2 and the second paragraph of instant pg. 14 support --the treated manganese ore having a degree of iron dissolution of 70% by weight or higher based on the iron contained in the treated manganese ore when dissolved in sulfuric acid.--

In claim 9, "thereby producing treated ... placed in sulfuric acid" is new matter. Original claim 2 and the second paragraph of instant pg. 14 support --the treated manganese ore having a degree of iron dissolution of 70% by weight or higher based on the iron contained in the treated manganese ore when dissolved in sulfuric acid.--

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1,3-9,16-22,35,36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Welsh '097.

Welsh suggests the instantly claimed process of treating a manganese dioxide ore with a reducing gas of producer gas which is a mixture of methane, hydrogen, carbon monoxide and inert gases at the instantly claimed temperature, eg. 1000-1100°F (538-593°C), which would produce the instantly claimed treated manganese dioxide ore having the instantly claimed product characteristics since the taught process is the same as that instantly claimed. See claim 1 and cols. 3,12,13,15. The reduced manganese ore is then cooled in a non-oxidizing atmosphere. See col. 14, lines 1-15.

Any difference imparted by the product by process limitations would have been obvious to one having ordinary skill in the art at the time the invention was made because where the examiner has found a substantially similar product as in the applied prior art the burden of proof is shifted to the applicant to establish that their product is patentably distinct not the examiner to show the same process of making, In re Brown, 173 USPQ 685, In re Fessmann, 180 USPQ 324, In re Spada, 15 USPQ2d 1655, In re Fitzgerald, 205 USPQ 594, and MPEP 2113.

Where the claimed and prior art product(s) are identical or substantially identical, or are produced by identical or substantially identical process(es) the burden of proof is on applicant to establish that the prior art product(s) do not necessarily or inherently possess the characteristics of the instantly claimed product(s), see *In re Best*, 195 USPQ 430.

Claims 1,3-6,10-12,23,25-30,37,38 are rejected under 35 U.S.C. 103(a) as being unpatentable over *El Tawil* '216.

El Tawil suggests the instantly claimed process of claim 4 which would form the instantly claimed product of a treated manganese dioxide ore having the instantly claimed characteristics since the taught processes are the same as that instantly claimed for making the product. Also taught is cooling the reduced ore in an aqueous bath at less than 100°C. See cols. 2,4 and the claims.

Any difference imparted by the product by process limitations would have been obvious to one having ordinary skill in the art at the time the invention was made because where the examiner has found a substantially similar product as in the applied prior art the burden of proof is shifted to the applicant to establish that their product is patentably distinct not the examiner to show the same process of making, *In re Brown*, 173 USPQ 685, *In re Fessmann*, 180 USPQ 324, *In re Spada*, 15 USPQ2d 1655, *In re Fitzgerald*, 205 USPQ 594, and MPEP 2113.

Where the claimed and prior art product(s) are identical or substantially identical, or are produced by identical or substantially identical process(es) the burden of proof is on applicant to

establish that the prior art product(s) do not necessarily or inherently possess the characteristics of the instantly claimed product(s), see *In re Best*, 195 USPQ 430.

Claims 1,3,4,6,7-9,16-21,35,36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yagihashi, et al. "Manganese Ore reduction with CO gas or CO-CO₂ gas mixture".

Yagihashi suggests the instantly claimed process which would form the instantly claimed product of a treated manganese dioxide ore having the instantly claimed characteristics since the taught process is the same as that instantly claimed for making the product. See pp. 1059, 1061, 1062. The reduced manganese ore is then cooled in a non-oxidizing atmosphere, eg. CO.

Any difference imparted by the product by process limitations would have been obvious to one having ordinary skill in the art at the time the invention was made because where the examiner has found a substantially similar product as in the applied prior art the burden of proof is shifted to the applicant to establish that their product is patentably distinct not the examiner to show the same process of making, *In re Brown*, 173 USPQ 685, *In re Fessmann*, 180 USPQ 324, *In re Spada*, 15 USPQ2d 1655, *In re Fitzgerald*, 205 USPQ 594, and MPEP 2113.

Where the claimed and prior art product(s) are identical or substantially identical, or are produced by identical or substantially identical process(es) the burden of proof is on applicant to establish that the prior art product(s) do not necessarily or inherently possess the characteristics of the instantly claimed product(s), see *In re Best*, 195 USPQ 430.

Claims 32-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over El Tawil '216 or Welsh '097 or Yagihashi et al., as applied to the claims above, and further in view of

Bowerman '043 and even further in view of Takehara '902 or Riggs, Jr. '320 or Andersen '484 or Andersen '198.

The primary references teach or suggest the instantly claimed process as explained above but may differ in that dissolving the reduced manganese ore in sulfuric acid and further electrolytic oxidation treatment of the dissolved ore to form electrolytic manganese dioxide may not be stated.

Bowerman teaches dissolving reduced manganese ore in sulfuric acid. See cols. 2-4. Each of Takehara '902 or Riggs, Jr. '320 or Andersen '484 or Andersen '198 teaches or at least suggests the instantly claimed process of subjecting a manganese sulfate solution to electrolytic oxidation to form electrolytic manganese dioxide. See the abstract of each.

It would have been obvious to one skilled in the art to use the reduced manganese ore from each of the primary references as the feed in Bowerman to form manganese sulfate solution because Bowerman requires the reduced manganese ore that is formed by each of the primary references. Furthermore, it would have been obvious to one skilled in the art to use the manganese sulfate solution formed in Bowerman as the electrolytic oxidizing solution in the process of each of Takehara or Riggs, Jr. or Andersen '484 or Andersen '198 because these references require the manganese sulfate solution that is formed in Bowerman. In re Kamlet, 88 USPQ 106.

Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takehara '902 or Andersen '198 or Andersen '198 or Riggs, Jr. '320.

Each of the references teaches the instantly claimed electrolytic manganese dioxide. See the abstract of each.

Any difference imparted by the product by process limitations would have been obvious to one having ordinary skill in the art at the time the invention was made because where the examiner has found a substantially similar product as in the applied prior art the burden of proof is shifted to the applicant to establish that their product is patentably distinct not the examiner to show the same process of making, In re Brown, 173 USPQ 685, In re Fessmann, 180 USPQ 324, In re Spada, 15 USPQ2d 1655, In re Fitzgerald, 205 USPQ 594, and MPEP 2113.

Where the examiner has found a substantially similar product as in the applied prior art the burden of proof is shifted to the applicant to establish that their product is patentably distinct, see In re Best, 195 USPQ 430.

Applicant's arguments filed August 5, 2003 have been fully considered but they are not persuasive.

Applicant notes that Yagihashi et al and Welsh disclose the reduction of manganese ore with a reducing gas at a temperature of 700°C but argue that neither reference obtains the instantly claimed product having the instantly claimed product characteristics.

However this does not overcome the fact that each of Yagihashi et al and Welsh discloses the instantly claimed process of making the instantly claimed product. It is not clear on the record how applicant can obtain a different product from that of the prior art when the prior art discloses the same process as is instantly claimed for making the instantly claimed product.

Applicant states that Welsh does not teach or suggest a treated manganese ore having the minimum 98% dissolvability in sulfuric acid.

However instant claim 4 recites that the instant treated manganese ore is obtained by contacting manganese ore with a reducing gas at 400-790°C which is taught by Welsh. Therefore Welsh must also obtain the instantly claimed treated manganese ore.

Applicant states that Welsh teaches the reducing gas to be a methane rich hydrocarbonaceous gas-air mixture of a specified ratio of air to methane, first through a body of manganese ore whose "oxide of manganese content is in the form of MnO."

However Welsh in col. 3 shows that the synthesis gas does not contain any oxygen since the components of the producer or synthesis gas add up to 100% and do not include oxygen. Cols. 3-4 of Welsh also suggest the instantly claimed amount of reducing gas to be used to reduce manganese dioxide containing ore.

Applicant's reference to a "K elimination ratio" and to Sasaki is unclear and unpersuasive. Sasaki has not been used in a rejection of the instant claims.

Applicant's arguments of Kane are persuasive and the rejection over same is withdrawn.

Applicant states that the route employed by El Tawil to prepare a grade of manganese oxide acceptable from which to obtain an electrolytic grade of MnO₂ is quite different from the method of production of the process claim embodiments of the present invention.

However El Tawil does teach contacting manganese dioxide ore (see col. 2, line 60) with a reducing gas (see col. 3, lines 29-35) at or within the instantly claimed temperatures (see col. 3, lines 1-18) which is the same process as is recited in instant claim 4.

Applicant states that El Tawil discloses cooling of the treated ore in an aqueous bath which is quite different from the cooling technique of present claims 7 and 24.

However this reference is not used to reject claim 7 and has been dropped from the rejection of claim 24.

El Tawil does teach the use of methane in col. 5, lines 42-43.

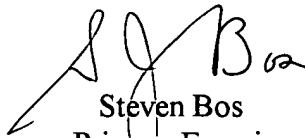
In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., reduced concentration of potassium impurity) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

With regard to the product-by-process claim 34 wherein the product is electrolytic manganese dioxide each of the cited references rejecting this claim teach electrolytic manganese dioxide and any difference imparted by the product by process limitations would have been obvious to one having ordinary skill in the art at the time the invention was made because where the examiner has found a substantially similar product as in the applied prior art the burden of proof is shifted to the applicant to establish that their product is patentably distinct not the examiner to show the same process of making, *In re Brown*, 173 USPQ 685, *In re Fessmann*, 180 USPQ 324, *In re Spada*, 15 USPQ2d 1655, *In re Fitzgerald*, 205 USPQ 594, and MPEP 2113.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven Bos whose telephone number is (703) 308-2537. The examiner is on the increased flexitime program schedule and can normally be reached between 8AM and 6PM Monday through Friday. The FAX No. for amendments is 703-872-9306. Any inquiry of a general nature or relating to the status of this application should be directed to the receptionist whose telephone number is (703) 308-0661.


Steven Bos
Primary Examiner
Art Unit 1754